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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/841,622	04/23/2001	Bulent M. Basol	NT-0206	5409
	7590	12/04/2003	EXAMINER	
NuTool, Inc Attn: Legal 1655 McCandless Drive Milpitas, CA 95035			TRAN, BINH X	
			ART UNIT	PAPER NUMBER
			1765	

DATE MAILED: 12/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/841,622

Applicant(s)

BASOL ET AL.

Examiner

Binh X Tran

Art Unit

1765

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 32-59 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 32-36, 46-51 and 54-59 is/are allowed.
- 6) ☒ Claim(s) 37-40 and 43-45 is/are rejected.
- 7) ☐ Claim(s) 41, 42, 53 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 20020212. 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of Group II (claims 32-59) in Paper filed on 9-15-2003 is acknowledged.

### ***Claim Objections***

2. Claim 37 is objected to because of the following informalities:

In claim 37, "transporting said solution from said electrode assembly and to a mask plate" (emphasis added) appears to have improper grammar. The examiner suggests deleting the term "and". Appropriate correction is required.

3. Claim 53 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. In claim 53, the applicant wrote, "The electropolishing method of claim 46, wherein application of different power." This claim appears to be incomplete. It also fails to further limit the subject matter of a previous claim because applicants already disclose each cathode is adapted to receive different power in claim 46.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 37-40, 43-45 are rejected under 35 U.S.C. 102(e) as being anticipated by Emesh et al. (US 2002/0108861 A1).

Emesh discloses a method for etching a semiconductor wafer comprising the steps of:

flowing a solution (electrolytic solution) through an electrode assembly, which comprises a first electrode member and a second electrode member (i.e. plurality of member 50 separated by channel 110; See Fig 4, 6);

transporting the solution from the electrode member assembly to a mask plate (i.e., polishing pad 40) that interfaces the wafer (60) (page 3-4);

wetting selected parts of the wafers with the electrolytic solution;

applying a current to selected parts of the wafer by using the electrical conductor member (70) (See Fig 4, 6).

Respect to claim 38, Emesh teaches to interface the first and second electrode members (i.e. plurality of member 50) with the selected part of the wafer (Fig 4, 6).

Respect to claims 39-40, Emesh teaches to direct the solution to the peripheral parts and the center part by using channel 110 (Fig 4-5). Respect to claims 43, Emesh teaches to polish the wafer with the mask plate (40) (i.e. polishing pad). Respect to claims 44-45, Emesh discloses the electrode assembly comprises cathode (negative charge member 50) and/or anode (positive charge member 70).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 37-40, 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Datta et al. (US 6,103,096) in view of Uzoh et al. (US 6,261,426).

Datta discloses a method for etching a semiconductor wafer comprising the steps of:

flowing a solution (i.e., electrolyte) through an electrode assembly (40), which comprises a first electrode member and a second electrode member (i.e. plurality of member 42, See Fig 2);

wetting selected parts of the wafer (14) with the solution (Fig 1);

applying a current (from power supply 28) to the selected parts of the wafer (Fig 1).

Datta fails to disclose the step of transporting the solution from the electrode assembly to a mask plate that interfaces the wafer. Uzoh teaches to transfer the electrolyte from the electrode assembly to a mask plate (8) that interfaces the wafer (12). It would have been obvious to one having ordinary skill in the art, at the time of invention, to modify Datta in view of Uzoh, by transferring the electrolyte from the electrode assembly to a mask plate because the mask plate will help to control the flow of the electrolyte solution.

Respect to claim 38, Datta discloses interfacing the first and second electrode members with the selected parts of the wafer (Fig 1). Respect to claim 39-40, Datta teaches to direct the solution at the peripheral part and a center part of the wafer. Respect to claim 44, Datta discloses the electrode assembly comprises a cathode assembly (col. 3 lines 25-35).

***Allowable Subject Matter***

9. Claims 32-36, 46-51, 53-59 are allowed.
10. Claims 41-42 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
11. The following is a statement of reasons for the indication of allowable subject matter: The cited prior arts fail to disclose or suggest one of the following step in conjunction with all other limitations in the claim: connecting the multiple cathode

members to multiple power sources, wherein the multiple cathode members are substantially electrically isolated from one another; or etching the center part prior etching the peripheral part; or supplying power to each cathode of the at least two cathodes, wherein each cathode is adapted to receive different power.

***Conclusion***

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Binh X Tran whose telephone number is (703) 308-1867. The examiner can normally be reached on Monday-Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine G Norton can be reached on (703) 305-2667. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Binh X. Tran

  
ROBERT KUNEMUND  
PRIMARY EXAMINER